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APPLICATION NO.	F	ILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,719	09/752,719 01/03/2001		Robert Williams	F0697	1217
26615	7590	04/29/2004		EXAMINER	
HARRITY			MAURO JR,	MAURO JR, THOMAS J	
11240 WAP SUITE 300	LES MIL	L ROAD	ART UNIT	PAPER NUMBER	
FAIRFAX, VA 22030				2143	
				DATE MAILED: 04/29/2004	· ×

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)			
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Office Action Summary	Examiner	Art Unit			
The MAIL INC DATE of this communication and	Thomas J. Mauro Jr.	2143			
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	correspondence address			
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	66(a). In no event, however, may a reply be tin within the statutory minimum of thirty (30) day illi apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	nely filed /s will be considered timely. I the mailing date of this communication. D (35 U.S.C. § 133).			
Status					
 1) Responsive to communication(s) filed on <u>03 Ja</u> 2a) This action is FINAL. 2b) This 3) Since this application is in condition for alloware closed in accordance with the practice under E 	action is non-final. ace except for formal matters, pro				
Disposition of Claims					
4) ☐ Claim(s) 1-23 is/are pending in the application. 4a) Of the above claim(s) is/are withdray 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-23 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or					
Application Papers					
9) ☐ The specification is objected to by the Examine 10) ☑ The drawing(s) filed on 26 March 2001 is/are: a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) ☐ The oath or declaration is objected to by the Ex	a)⊠ accepted or b)□ objected t drawing(s) be held in abeyance. Se ion is required if the drawing(s) is ob	e 37 CFR 1.85(a). ejected to. See 37 CFR 1.121(d).			
Priority under 35 U.S.C. § 119					
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the prior application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Applicat ity documents have been receiv ı (PCT Rule 17.2(a)).	ion No ed in this National Stage			
Attachment(s) 1) ☒ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5.7</u> .	4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal F 6) Other:				

Art Unit: 2143

DETAILED ACTION

1. Claims 1-23 are pending and are presented for examination. A formal action on the merits of claims 1-23 follows.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 09/877,122. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both disclose similar devices for controlling the flow of communications on a network.

For example, claim 1 of the instant application describes a device which detects a condition associated with a resource on a network device, generates a pause frame with a priority indication to suspend data traffic and transmits the pause frame to a station. Similarly, claim 1

Art Unit: 2143

copending application 09/877,122 describes a device which detects a condition associated with a resource on a network device, generates a pause frame with a source address indicator to suspend data traffic and transmits the pause frame to a device, i.e. station.

While copending application 09/877,122 does not explicitly mention frames having a priority indicator, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include such a priority indicator in a frame to further classify packets into various groups so that frames with a higher precedence are processed ahead of lower precedence packets.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 5. Claims 1-3, 11-13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drummond-Murray (U.S. 6,667,985) in view of Crinion et al. (U.S. 6,181,699).

Art Unit: 2143

Regarding claim 1, Drummond-Murray teaches a network device configured to control communication of data frames between stations, comprising:

a logic device configured to detect a condition associated with a resource on the network device [Drummond-Murray -- Col. 6 lines 19-34 – Switch contains threshold or watermark device which monitors output queue to determine if it is full at a given capacity, i.e. condition on switch];

a frame generating device configured to generate a pause frame requesting suspension of data traffic in response to the detection of the condition [Drummond-Murray -- Col. 4 lines 62-67 - Col. 5 lines 1-3 and Col. 8 lines 16-25 - Flow control frame, i.e. pause frame, is generated which its purpose is to pause traffic from a given device because a condition, i.e. full queue, was detected]; and

a transmit device configured to transmit the pause frame to at least one station

[Drummond-Murray -- Col. 4 lines 62-67 - Col. 5 lines 1-3 and Col. 7 lines 16-26 and 53-61

- Flow control frame is sent to device which most contributed most to the traffic].

Drummond-Murray fails to teach the frame including a priority indicator.

Crinion, however, discloses inserting tag data into a frame which includes priority information for the frame [Crinion - Col. 3 lines 13-15 and lines 62-67].

In addition, Drummond-Murray indicate that traffic restrictions can be imposed on certain priority lows, for example, low priority flows will be restricted, while high priority, i.e. critical, flows will not be affected because it is not the problem [Drummond-Murray -- Col. 4 lines 1-14].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

Art Unit: 2143

was made to incorporate the priority indication within a frame, as taught by Crinion into the invention of Drummond-Murray, in order to provide more intelligent tag data in frames which allows for more intelligent and rank of order in processing frames based upon critical nature of the frame.

Regarding claim 2, Drummond-Murray and Crinion teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the priority indicator includes information representing one of a plurality of types of data frames [Drummond-Murray -- Col. 4 lines 8-14 – Data frame types include both high and low priority traffic frames].

Regarding claim 3, Drummond-Murray and Crinion teach the invention substantially as claimed, as aforementioned in claim 2 above, including wherein the plurality of types of data frames includes high priority frames and low priority frames [Drummond-Murray -- Col. 4 lines 8-14 – Specific data frame types include high priority traffic, i.e. frames, and low priority traffic, i.e. frames].

Regarding claims 11-12, these are method claims corresponding to the device claimed in claims 1-2. They have similar limitations; therefore, claims 11-12 are rejected under the same rationale.

Regarding claim 13, Drummond-Murray and Crinion teach the invention substantially as claimed, as aforementioned in claim 12 above, including wherein the plurality of types of data

Art Unit: 2143

frames includes high priority frames and low priority frames [Drummond-Murray -- Col. 4 lines 8-14 - Specific data frame types include high priority traffic, i.e. frames, and low priority traffic, i.e. frames], the priority indicator in the pause frame corresponding to the first type of data frame [Crinion -- Col. 7 line 67 - Col. 8 lines 1-10 - Priority in frame is compared to a mask, and depending on bit value, will be marked with proper priority].

Regarding claim 21, Drummond-Murray teaches the invention substantially as claimed, a computer-readable medium having a data structure comprising:

a source address field [Drummond-Murray -- Col. 4 lines 56];

a destination address field [Drummond-Murray -- Col. 4 lines 56]; and

a pause time field including information representing a length of time for at least one receiving station identified by the destination address field to suspend data transmissions relating to the priority level in the priority field [Drummond-Murray -- Col. 4 lines 62-67 - Col. 5 lines 1-3 - Pause field indicates interval, i.e. length of time, for packet transmission to be ceased]. Drummond-Murray fails to teach the frame including a priority indicator.

Crinion, however, discloses inserting tag data into a frame which includes priority information for the frame [Crinion -- Col. 3 lines 13-15 and lines 62-67].

In addition, Drummond-Murray indicate that traffic restrictions can be imposed on certain priority lows, for example, low priority flows will be restricted, while high priority, i.e. critical, flows will not be affected because it is not the problem [Drummond-Murray -- Col. 4 lines 1-14].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

Art Unit: 2143

was made to incorporate the priority indication within a frame, as taught by Crinion into the invention of Drummond-Murray, in order to provide more intelligent tag data in frames which allows for more intelligent and rank of order in processing frames based upon critical nature of the frame.

6. Claims 4-8, 10, 14-18, 20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drummond-Murray (U.S. 6,667,985) and Crinion et al. (U.S. 6,181,699), as applied above to claims 1 and 11 above respectively, in view of Lyon (U.S. 6,721,273).

Regarding claim 4, Drummond-Murray and Crinion teach the invention substantially as claimed, as aforementioned in claim 1 above, but fail to teach a plurality of queues having different levels of priority for storing frame information and a priority detection device able to identify frame priority and store information in the proper priority queue.

Lyon, however, discloses a plurality of input and output queues upon which the cell tap and demultiplexer read the frame priorities and outputs the frames to the respective queues [Lyon -- Figures 3 and 6, Col. 6 lines 10-29 and Col. 7 lines 28-37].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a plurality of queues based upon priority and assigning frames based upon the frame priority to these queues, as taught by Lyon into the invention of Drummond-Murray and Crinion, in order to improve upon the flow of traffic in and out of a switch and to provide more

Art Unit: 2143

reliability such that higher priority traffic will be given a better chance of making it through congestion over low priority traffic.

Regarding claim 5, Drummond-Murray-Crinion-Lyon teach the invention substantially as claimed, as aforementioned in claim 4 above, including detecting the condition when frame forwarding information associated with a predetermined number of data frames having a first priority [Lyon -- Figures 3 and 6, Col. 6 lines 10-29 and Col. 7 lines 28-37 - Plurality of queues exist, each queue responsible for a different priority frame] are stored in a first one of the plurality of queues [Drummond-Murray -- Col. 5 lines 51 and 54 (receive and transmit queues), Col. 6 lines 19-40 and Col. 7 lines 16-26 - Condition, i.e. queue is congested whether full or above a threshold capacity, is detected by monitoring and examining the different queue, i.e. different priority, levels based upon the number of frames stored in them].

Regarding claim 6, Drummond-Murray-Crinion-Lyon teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the condition relates to a congestion condition [Drummond-Murray -- Col. 5 lines 51 and 54 (receive and transmit queues), Col. 6 lines 19-40 and Col. 7 lines 16-26 - Condition, i.e. queue is congested whether full or above a threshold capacity, is detected by monitoring and examining the different queue, i.e. different priority, levels based upon the number of frames stored in them] associated with data frames having a first priority [Lyon -- Figures 3 and 6, Col. 6 lines

Art Unit: 2143

10-29 and Col. 7 lines 28-37 – Plurality of queues exist, each queue responsible for a different priority frame], and the priority indicator includes information representing the first priority [Crinion -- Col. 7 line 67 – Col. 8 lines 1-10 – Priority in frame is compared to a mask, and depending on bit value, will be marked as high priority or low priority], the at least one station suspending transmission of data frames relating to the first priority for a period of time after receiving the pause frame and continuing transmission of data frames having a priority other than the first priority [Drummond-Murray -- Col. 4 lines 1-14 – Specified ports, each differing in the level of priority they service, are individually subject to traffic reduction while others are unaffected. For example, if congestion is caused by low priority traffic, low priority traffic is reduced, while high priority, i.e. more critical traffic, is still passed].

Regarding claim 7, Drummond-Murray-Crinion-Lyon teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the condition relates to a congestion condition, the congestion condition occurring when a predetermined number of data frames having a first priority [Lyon -- Figures 3 and 6, Col. 6 lines 10-29 and Col. 7 lines 28-37 - Plurality of queues exist, each queue responsible for a different priority frame] are stored in at least one of an input queue and an output queue [Drummond-Murray -- Col. 5 lines 51 and 54 (receive and transmit queues), Col. 6 lines 19-40 and Col. 7 lines 16-26 - Condition, i.e. queue is congested whether full or above a threshold capacity, is detected by monitoring and examining the queue levels based upon the number of frames stored in transmit, i.e. output queue] associated with a first port of the network device [Drummond-

Application/Control Number: 09/752,719 Page 10

Art Unit: 2143

Murray -- Figure 3 and Col. 5 lines 27-45 - Network device, i.e. switch associates each port with an input and output queue].

Regarding claim 8, Drummond-Murray-Crinion-Lyon teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein the condition comprises a congestion condition, the congestion condition occurring when a portion of a predetermined number of data frames having a first priority [Lyon -- Figures 3 and 6, Col. 6 lines 10-29 and Col. 7 lines 28-37 – Plurality of queues exist, each queue responsible for a different priority frame] are stored in a queue of a device configured to generate frame forwarding information [Drummond-Murray -- Col. 5 lines 51 and 54 (receive and transmit queues), Col. 6 lines 19-40 and Col. 7 lines 16-26 - Condition, i.e. queue is congested whether full or above a threshold capacity, is detected by monitoring and examining the queue levels based upon the number of frames stored in the queue].

Drummond-Murray-Crinion-Lyon fail to explicitly teach an input queue causes a congestion condition.

Drummond-Murray-Crinion-Lyon, however, do teach that an output queue is monitored and checked for congestion condition.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that any queue, including an input queue, could be just as easily monitored like the output queue in order to provide further congestion control and prevent such cascading backups due to congestion.

Art Unit: 2143

Regarding claim 10, Drummond-Murray-Crinion-Lyon teach the invention substantially as claimed, as aforementioned in claim 1 above, further comprising:

a receive device configured to receive data frames from the stations [Drummond-Murray -- Col. 5 lines 46-52 - Receive queues receive packets from respective ports], the data frames having a priority indicator [Crinion -- Col. 3 lines 13-15 and lines 62-67 - Tag inserted in frame contains frame priority information]; and

priority mapping logic configured to convert the priority indicator received with the respective data frames to one of a number of priority levels supported by the network device [Lyon -- Figure 6 and Col. 7 lines 19-37 and Col. 7 lines 54-67 - Col. 8 lines 1-8 - Frames, i.e. cells, as they arrive, processes them and stores them into the proper queue based upon the priority identification in the frame].

Regarding claim 14, Drummond-Murray-Crinion-Lyon teach the invention substantially as claimed, as aforementioned in claim 11 above, including identifying a priority associated with the queue, the priority corresponding to the priority indicator in the pause frame [Lyon -- Figures 3 and 6, Col. 6 lines 10-29 and Col. 7 lines 28-37 – Cells, i.e. frames are stored based upon their priority in the proper queue having the necessary priority. Therefore, the device must ascertain the priority of the queue in order to know where to store the frame].

Regarding claims 15, 16 and 20, these are method claims relating to the device claimed in claims 7, 5 and 10 respectively. They have similar limitations; therefore, claims 15, 16 and 20 are rejected under the same rationale.

Art Unit: 2143

Regarding claims 17 and 18, these are method claims corresponding to the device claimed in claim 6. They have similar limitations; therefore, claims 17 and 18 are rejected under the same rationale.

Regarding claim 22, Drummond-Murray teaches the invention substantially as claimed, a data communication system, comprising:

a first device configured to:

receive data frames from at least one station [Drummond-Murray -- Col. 5 lines

46-52 - Receive queues receive packets from respective ports],

detect a congestion condition when at least a predetermined number of data frames are being processed by the first device [Drummond-Murray -- Col. 5 lines 51 and 54 (receive and transmit queues), Col. 6 lines 19-40 and Col. 7 lines 16-26 - Condition, i.e. queue is congested whether full or above a threshold capacity, is detected by monitoring and examining the queue levels based upon the number of frames stored in transmit, i.e. output queue],

generate a pause frame requesting suspension of data transmissions in response to the congestion condition [Drummond-Murray -- Col. 4 lines 62-67 - Col. 5 lines 1-3 and Col. 8 lines 16-25 - Flow control frame, i.e. pause frame, is generated which its purpose is to pause traffic from a given device because a condition, i.e. full queue, was detected], and

Art Unit: 2143

transmit the pause frame to at least one station [Drummond-Murray -- Col. 4 lines 62-67 - Col. 5 lines 1-3 and Col. 7 lines 16-26 and 53-61 - Flow control frame is sent to device which most contributed most to the traffic]; and a second device configured to:

receive the pause frame [Drummond-Murray -- Col. 4 lines 66 – Intended device will receive PAUSE frame]; and

suspend transmission of data frames [Drummond-Murray Col. 4 lines 65-67 – Col. 5 lines 1-3 – Device receiving PAUSE frame, will cease sending packets to the recipient] relating to the first priority and continuing transmission of data frames relating to a second priority [Drummond-Murray -- Col. 4 lines 1-14 – Specified ports, each differing in the level of priority they service, are individually subject to traffic reduction while others are unaffected. For example, if congestion is caused by low priority traffic, low priority traffic is reduced, while high priority, i.e. more critical traffic, is still passed].

Drummond-Murray fails to teach the frame including a priority indicator and determining a priority associated with the received data frames.

Crinion, however, discloses inserting tag data into a frame which includes priority information for the frame [Crinion -- Col. 3 lines 13-15 and lines 62-67].

In addition, Drummond-Murray indicate that traffic restrictions can be imposed on certain priority lows, for example, low priority flows will be restricted, while high priority, i.e. critical, flows will not be affected because it is not the problem [Drummond-Murray -- Col. 4 lines 1-14].

Art Unit: 2143

Furthermore, Lyon discloses a plurality of input and output queues upon which the cell tap and demultiplexer read the frame priorities, as frames are received and outputs the frames to the respective queues [Lyon -- Figures 3 and 6, Col. 6 lines 10-29 and Col. 7 lines 28-37].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the priority indication within a frame, as taught by Crinion, along with determining a priority associated with the received data frames, as taught by Lyon into the invention of Drummond-Murray, in order to provide more intelligent tag data in frames which allows for more intelligent and rank of order in processing frames based upon the critical nature of the frame, to improve upon the flow of traffic in and out of a switch and to provide more reliability such that higher priority traffic will be given a better chance of making it through congestion over low priority traffic.

Regarding claim 23, Drummond-Murray teaches the invention substantially as claimed, a first network device, comprising:

a receive device configured to receive data frames from at least one of the network stations and other network devices [Drummond-Murray -- Col. 5 lines 46-52 - Receive queues receive packets sent from various other devices on at the respective ports]; and data frame processing logic configured to:

identify a received data frame as a pause frame [Drummond-Murray -- Col. 4 lines 66 – Intended device will receive PAUSE frame, therefore, it is obvious that the device has identified the type of frame as a PAUSE frame],

Art Unit: 2143

suspend transmission of data frames [Drummond-Murray Col. 4 lines 65-67 – Col. 5 lines 1-3 – Device receiving PAUSE frame, will cease sending packets to the recipient] corresponding to the first priority, and continue transmission of data frames corresponding to priorities other than the first priority [Drummond-Murray -- Col. 4 lines 1-14 – Specified ports, each differing in the level of priority they service, are individually subject to traffic reduction while others are unaffected. For example, if congestion is caused by low priority traffic, low priority traffic is reduced, while high priority, i.e. more critical traffic, is still passed].

Drummond-Murray fails to teach the frame including a priority indicator and mapping the priority indicator to a first priority.

Crinion, however, discloses inserting tag data into a frame which includes priority information for the frame [Crinion -- Col. 3 lines 13-15 and lines 62-67].

In addition, Drummond-Murray indicate that traffic restrictions can be imposed on certain priority lows, for example, low priority flows will be restricted, while high priority, i.e. critical, flows will not be affected because it is not the problem [Drummond-Murray -- Col. 4 lines 1-14].

Furthermore, Lyon discloses processing, i.e. mapping, the received frames to a priority based on the identification in the frame [Lyon -- Figure 6 and Col. 7 lines 19-37 and Col. 7 lines 54-67 - Col. 8 lines 1-8 - Frames, i.e. cells, as they arrive, processes them and stores them into the proper queue based upon the priority identification in the frame].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the priority indication within a frame, as taught by Crinion, along with mapping

Art Unit: 2143

the received frames to a priority based on frame identification, as taught by Lyon into the invention of Drummond-Murray, in order to provide more intelligent tag data in frames which allows for more intelligent and rank of order in processing frames based upon critical nature of the frame, to improve upon the flow of traffic in and out of a switch and to provide more reliability such that higher priority traffic will be given a better chance of making it through congestion over low priority traffic

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drummond-Murray (U.S. 6,667,985) and Crinion et al. (U.S. 6,181,699), as applied above to claims 1 and 11 above respectively, in view of Applicant's Admitted Prior Art (AAPA)

Regarding claim 9, Drummond-Murray and Crinion teach the invention substantially as claimed, as aforementioned in claim 1 above, including priority information in frame [Crinion -- Col. 3 lines 13-15 and lines 62-67 – Tag inserted in frame contains frame priority information].

Drummond-Murray and Crinion fail to explicitly teach transmitting an auto-negotiation message to a network device, i.e. station.

AAPA, however, teaches that the auto-negotiation feature is defined in the IEEE 802.3 standard. Therefore, transmitting messages using such a feature was well known and in the public's knowledge at the time the invention was made.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was

Art Unit: 2143

made to incorporate the transmission of messages to network devices using the auto-negotiation feature of the IEEE 802.3 standard into the invention of Drummond-Murray and Crinion, in order to provide a useful and convenient way to communicate reliably with other network devices using a standardized feature.

Page 17

Regarding claim 19, this is a method claim corresponding to the device claimed in claim 9. It has similar limitations; therefore, claim 19 is rejected under the same rationale.

Conclusion

- 8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - Chong et al. (U.S. 6,212,582) discloses a method for controlling data packet traffic flow which switches packets based upon multiple priority levels.
 - Aydemir et al. ("Flow Control in Gbs Ethernet Networks) discloses the use of incorporating a priority level into a Pause frame to identify a specific offending stream/flow.

Art Unit: 2143

Page 18

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJM

April 23, 2004

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